

Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

END920010057US1 (00240088AA)

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Application Number

10/079,651

Filed

02/20/2002

First Named Inventor

A. Campisano

Art Unit

2616

Examiner

D. Czekaj

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record. 33,138
Registration number _____

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

Signature

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December 1, 2005

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Francesco A. Campisano

Conf. No.: 8459

Serial No.: 10/079,651

Group Art Unit: 2616

Filed: February 20, 2002

Examiner: D. Czekaj

For: LOW LATENCY VIDEO DECODER WITH HIGH-QUALITY,
VARIABLE SCALING AND MINIMAL FRAME BUFFER MEMORY

Mail Stop AF
Commissioner for Patents
United States Patent and Trademark Office
P. O. Box 1450
Alexandria, Virginia 22313-1450

ATTACHMENT TO PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

This Pre-Appeal Brief Request for Review is being concurrently filed in the USPTO with a Notice of Appeal. If any additional fees are required to satisfy the fees due for the Notice of Appeal or to gain entry and consideration of this Pre-Appeal Brief Request for review, the Commissioner is authorized to charge any such additional fees to Deposit Account 09-0457 of International Business Machines Corporation (Endicott).

No amendments are submitted herewith. The Advisory Action mailed November 1, 2005, indicates that the amendment filed September 12, 2005, will be entered for purposes of Appeal and should be entered in view of the concurrently filed Notice of Appeal.

The Invention

The invention was summarized in the remarks appended to the amendment filed September 12, 2005, as follows:

“As previously pointed out, the invention is directed to the function of scaling of images *transmitted in a compressed and encoded form* at the location of the set-top box (STB) to provide arbitrarily positioned images of arbitrary aspect ratio on the display screen, possibly in a picture-in-

picture format under control of a user and is principally concerned with problems of latency, decoding time and minimization of additional memory and cost thereof which may be required to do so reliably and unconditionally. As described in detail in the specification with reference to Figures 1B and 2, the decoding and decompression of images, particularly moving images in which some images are decoded with bi-directional reference to past and future fields or frames, is extremely complex and decoding time for a field or frame within the corresponding display time of a field or frame even without scaling or positioning cannot be guaranteed while scaling and/or positioning reduces the time available for decoding. The invention as recited in claim 1 solves this problem by synchronizing the decoder for decoding the compressed data with the display of the bottom border (coincident with the end of display of a decoded image) if the image is scaled and/or positioned which thus recovers the potential decoding time which would otherwise be lost in the bottom border while avoiding increase of latency by field or frame intervals and allowing required storage for the top and bottom border periods to be provided by much more economical spill buffer arrangements, the capacity of which can be based entirely on economic concerns.”

The salient features of the invention supporting these meritorious effects are recited in claim 1 as:

“*determining a frame switch point* in accordance with a signal corresponding to completion of decoding of a previous frame, and

“*synchronizing said motion video decoder for decoding compressed image data in accordance with one of display of a bottom border of a scaled image and said frame switch point*” (emphasis added).

Additionally, independent claim 9 is directed to a perfecting feature of the invention which is also recited in dependent claim 2 but which is believed separately patentable. This perfecting feature of the invention, as recited in claim 9 (and claim 2), involves “*testing*” the spill buffer capacity (to accommodate desired scaling and positioning) and “*controlling scaling*” (e.g. to a fixed amount of fractional scaling) in accordance with the result of the test. This feature, described on pages 26 - 28, allows minimization of the total capacity of the frame buffer and spill buffer while maintaining resolution of the scaled image and allowing additional scaling to be performed by interpolation.

Errors and Omissions

Initially it is noted that the remarks appended to the response filed February 18, 2005, in the paragraph bridging pages 10 and 11, include a suggestion that the Examiner may have come to an incomplete understanding of the invention by seeking to address the “gist” of the invention (e.g. merely providing for scaling and the use of a spill buffer) rather than the subject matter actually claimed (e.g. synchronizing decoding with particular points in the decoding or display processes in order to provide additional decoding time beyond that which would be provided by the prior art and testing spill buffer capacity top accommodate particular desired scaling and controlling the scaling performed based upon the result of the test). It is clear that the Examiner has not addressed the subject matter any more closely since the Macy et al. reference, newly applied in the final rejection appear of even less relevant to the recitations of claim 1 than the reference previously applied (as discussed on pages 6 - 8 of the response filed September 12, 2005, including the observations of the Examiner’s admissions in regard to the insufficiency of Macy et al. to answer the claimed subject matter) and the asserted ground of rejection based on the combination of Macy et al. and Cheney et al. (answered at pages 9 - 10 of the response filed September 12, 2005) which is substantially a verbatim repetition of the previous statement of the rejection *to the point of referring to a reference previously applied and withdrawn*).

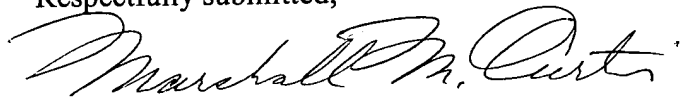
It also appears that, while Cheney et al. describes use of a spill buffer to reduce storage requirements for a frame buffer, any change in latency in Cheney et al. is a direct result of the MPEG low delay mode where b-frames are not present (see column 15, lines 49 - 53, of Cheney et al.) rather than reducing latency (and storage requirements) by providing additional decoding time and/or particular control of scaling. If the Examiner understands the significance of these features, the Examiner has, at best, improperly taken unjustified official notice of them through hindsight and has thus not made a *prima facie* demonstration of obviousness in either ground of rejection. Moreover, in the Advisory Action mailed November 1, 2005, the Examiner cites a passage of column 15 of Macy et al. which refers to decoding but which is devoid of any reference to the synchronization of decoding to the times recited and, further, the Advisory Action does not address the amendatory language which the Examiner indicates will be entered for Appeal. Similarly, the passages of Cheney et al. cited on pages 3 and 4 of the final rejection in regard to various dependent claims do not teach or suggest the subject matter of the language which the Examiner places in quotation marks.

Conclusion

Since there are features explicitly recited in each of the claims which are absent from the references relied upon, no combination of the references would provide the recited features or lead to an expectation of success in deriving the meritorious advantages of the invention by providing them. The Examiner has not addressed the subject matter actually claimed and has not made (and cannot make) a *prima facie* demonstration of obviousness of any claim in the application. The asserted grounds of rejection are clearly in error, particularly in view of the Examiner's admissions in regard to the insufficiency of Macy et al. to answer the claimed subject matter and the clear error in conclusions drawn from other disclosure of Macy et al. (page 2, last three lines of the final rejection); which errors are clearly grounded in hindsight. In view of the above, it is requested that the position taken by the Examiner be reviewed, that the asserted grounds of rejection be withdrawn, and that the application be allowed at an early date.

A petition for a one-month extension of time is being concurrently filed. If any further extension of time is required for this paper to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 09-0457 of International Business Machines Corporation (Endicott).

Respectfully submitted,



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